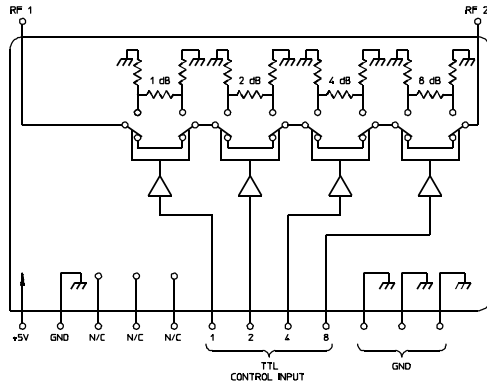


ADS-41V-1000

15 dB DIGITAL ATTENUATOR

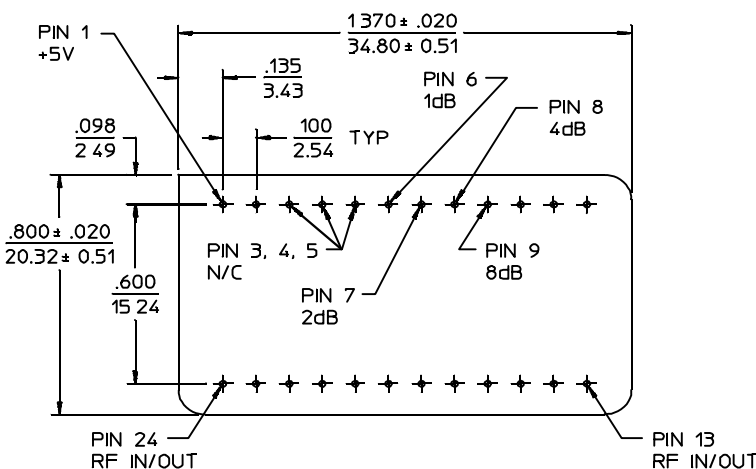
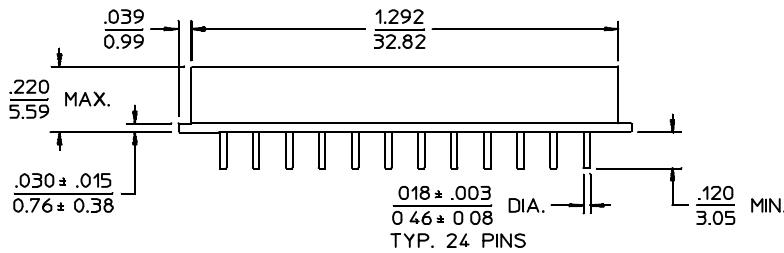
50 to 1500 MHz / 0 to 15 dB in 1 dB Steps / 4-Bit Direct TTL Control / Monotonic / +5V Supply



V Package Outline - 24 pin Dual In Line

| TRUTH TABLE | | | | |
|-------------------------|----------------|-----|-----|-----|
| Attenuation Setting, dB | Control Inputs | | | |
| | "6" | "7" | "8" | "9" |
| Reference | 0 | 0 | 0 | 0 |
| 1 | 1 | 0 | 0 | 0 |
| 2 | 0 | 1 | 0 | 0 |
| 4 | 0 | 0 | 1 | 0 |
| 8 | 0 | 0 | 0 | 1 |

"1" = Logic High TTL
"0" = Logic Low TTL

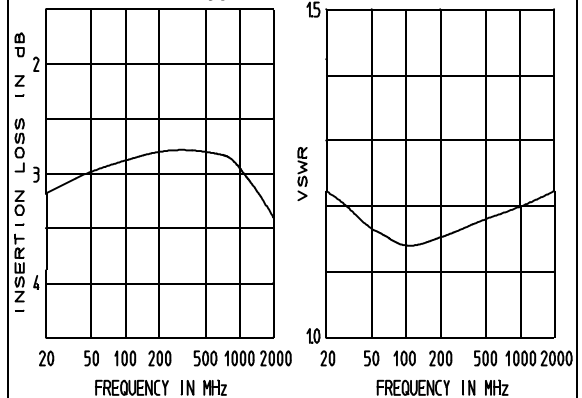


- NOTES:
1. Tolerance on 3 place decimals $\pm .010(.25)$ except as noted.
 2. Dimensions in inches over millimeters.
 3. Lead dimensions apply only at body.
 4. All unmarked terminals are ground.

GENERAL SPECIFICATIONS

- Frequency Range: 50 - 1500 MHz
- Attenuation Range: 0 - 15 dB
- Minimum Step Size: 1 dB
- Attenuation Flatness: ± 0.5 dB/bit max.
 ± 1.0 dB max
- Attenuation Accuracy: ± 0.5 dB at f_0
- Insertion Loss: 4 dB max.
- Phase Variation: $\pm 10^\circ$ typ.
- VSWR: 1.7:1 max.
- Impedance: 50 Ω nom.
- Switching Delay Time: 2 μ s typ.
(50% control transition to 10/90% RF)
- Switching Transients: 20 mV typ.
(50% control transition to 10/90% RF)
- Bias Requirement: +5 VDC
@ 80 mA nom.
- Input Intercept Point: +32 dBm typ.
- Input Power: 0.25 W max.
- Weight, nominal: 0.4 oz (11 g)
- Operating Temperature: -55° to $+85^\circ$ C

Typical Performance



General Notes:

1. The ADS-41V-1000 is constant impedance, 4-bit digital attenuator covering 50 to 1500 MHz and driven directly by TTL logic. PIN diode switched attenuator pads are activated by Advanced Fact™ C-MOS, TTL compatible logic drivers, allowing high speed operation without need of a negative supply.
2. Careful design of thick film resistive pads and detailed selection of suitable PIN diodes provide a wide bandwidth with minimal phase shift.

25Mar96

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